

## A NEW POTAMOBATES (GERRIDAE).

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The genus *Potamobates* was described by Champion<sup>1</sup> to embrace the species *P. unidentatus* Champ. and *P. bidentatus* Champ. (1901).

No new species were discovered until Professor Teiso Esaki<sup>2</sup> described *P. tridentatus* Esaki and *P. horvathi* Esaki which he found in the Hungarian National Museum (1926). A fifth species was described under the name *P. osborni* by Drake and Harris<sup>3</sup> in 1928. I now must add a sixth species from material that was sent to me from Ecuador some years ago by my friend F. X. Williams.

***Potamobates williamsi* sp. n.**

*Size:* Length of winged male 11.9 mm. Length of wingless males 11 mm., the wingless females are shorter being only 9 mm. long but somewhat plumper than the males.

*Color:* Body black above but marked with pale brown spots and silvery patches; venter pale. Head light brown above and paler beneath. The antennae for the most part dark brown. Beak with basal two segments and base of third segment pale. Pronotum black with a large triangular pale brown spot in the middle and silvery patches on the anterior half at the sides. In the winged individual the well developed pronotum is broadly margined with pale brown on the caudal half and a faint pale median line extending from the triangular patch in front to the pale margin behind. The mesonotum black bordered laterally with silvery pubescent bands and marked above by three pale brown figures, variable in shape. The median one may be a thin line broader behind and not attaining either front or rear margin or a broad band of uneven width. The lateral spots may be small and nearly round, triangular or quite elongate triangular figures which in one specimen have the inner angle united with the median line. The rear margined by thin line of silvery pubescence that joins to large triangular spots below which are silvery patches on the acetabula. Metanotum black with or without

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<sup>1</sup> *Biologia Centrali Americana, Insecta, Rhynchota Hemiptera-Heteroptera* Vol. II, p. 154, (1901).

<sup>2</sup> *Annales Musei Nationalis Hungarici*, Vol. XXIII, pp. 251-257. (1926.)

<sup>3</sup> *Proceedings of the Biological Society of Washington*, Vol. XLI, p. 25 (1928).

a light brown median spot that may be large and triangular or reduced to a line. Silvery patches on the acetabula. Abdomen black above with silvery pubescence laterally. The males with a light brown median spot on each segment beyond the first. Connexivum black usually with pale spots below on last segment. All coxae pale. Front femora light brown above dark below. Front tibiae and tarsi dark. Middle and hind legs brown with longitudinal dark stripe above and below on each femur. A short black streak on base of the cleft of the acetabula of the mesothorax.

*Structural characteristics:* Head about twice as long as broad between the eyes at the base. Antennal formula: 1st: 2nd: 3rd: 4th: : 10: 3.2: 3.6<sup>4</sup>: 4.7. The antennae turned backwards would not quite attain the rear margin of the mesonotum in the apterous male. Tip of beak barely attaining anterior margin of front coxae. Pronotum transverse, a little longer than half the width and slightly shorter than the length of the head. Humeri of winged specimen somewhat elevated and the margin behind sinuate on the sides, rounded at the apex. Mesonotum slightly more than three times the length of pronotum measured on dorsal line. A faint median depressed line more conspicuous on caudal third. Metanotum as long as the pronotum, both anterior and posterior margins concave. Anterior legs short. Femur of male incrassate, width is to the length as 7: 24. Five or six stout bristles in a longitudinal row on dorsal surface near the base, femur of female a little longer and not so broad. Tibia as long as the femur, longer than the margin opposite, projecting at inner side of apex, longitudinally depressed within, slightly incurved on distal half, its diameter less than one-third that of femur in male and greater than one-third in female. Tarsus trifle less than one-fourth length of tibia, first segment one-third as long as the second. Intermediate and posterior legs very long and slender. Intermediates the longer and stouter. Intermediate femur a little shorter than length of the insect. Formula for intermediate leg: Femur: tibia: tarsus: : 17: 12: 7. Tarsus tapering and curved, first segment three times as long as the second. Formula for posterior leg: Femur: tibia: tarsus: : 18: 10+<sup>5</sup>: 1.5. The posterior tarsus small, first segment longer than the second. The tergum of first abdominal segment fitting into the narrow posterior incision of thorax. The seventh abdominal tergite in the male a little longer than the two preceding tergites; in the female only two-fifths longer than the sixth tergite. In the male the connexivum triangularly produced behind. In

<sup>4</sup> Includes the short but very plain intersegment.

<sup>5</sup> Curved at distal end and difficult to measure.

the female the connexivum overlaps lateral margin of last tergite and is produced into a long, finger-like, somewhat incurved process longer than last two tergites and surpassing the genital segment by nearly half its length. The first genital segment of male measured on median dorsal line as long as four preceding abdominal tergites. The general shape of this segment much like *P. tridentatus* Esaki but having the large marginal teeth relatively larger and farther apart and posterior ventral margin with a much narrower concavity than in *P. tridentatus* Esaki. The hook-like tooth of the second genital segment begins to the right of the median line and terminates in the cleft between the other two teeth. The female genital segments much as in *P. tridentatus* Esaki. The connexivum terminating in a longer process. The V-shaped incision on the posterior margin of the sixth ventral segment of female cutting about half the length of that segment.

*Distributional notes:* The series from which the above description is drawn came from Tena and Mera, Ecuador, and were taken in February by F. X. Williams.

*Location of types:* Holotype, allotype, holomorphotype and paratypes in Francis Huntington Snow Entomological Museum, University of Kansas, and two paratypes in Professor Esaki's collection.

*Comparative notes:* This species is near *Potamobates tridentatus* Esaki from which it differs in the color pattern and (in the male genital segments) in having the acute teeth 1 and 2 farther apart and the number 3 closer to 1 and 2. The ventral posterior margin of the first genital has a narrower concavity. Specimens were sent to Professor Esaki who kindly compared them with his *P. tridentatus*. He writes: "*Potamobates williamsi* Hungerford is distinct from *tridentatus* Esaki. I have 1 ♂ and 1 ♀ paratype of my species and compared your specimens with them carefully. (1) *Williamsi* is much stouter in shape, and the legs are also stouter than in *tridentatus*. (2) ♂ genital segments are much larger in comparison with the rest of abdomen than in *tridentatus*. They are almost equally as long as the rest of abdomen in dorsal aspect in *williamsi*, while they are distinctly shorter than the rest of abdomen in *tridentatus*. (3) The differences in male genital segments are very correctly pointed out by you. It is especially distinct, in that the posterior margin of the first ventral segment shows a much narrower concavity than *tridentatus*. (4) the patterns on mesonotum are practically absent in *tridentatus*, though this character is not always stable."